Engineering Interpretations

Construction Material and Excavating

Soils are rated as sources for road fill, topsoil, sand, and gravel. Suitability ratings of good, fair, or poor are given for soils used as a source of road fill and topsoil. Ratings of probable and improbable are given for sand and gravel. A rating of probable means that on the basis of the available evidence, the source material is likely to be in or below the soil. A rating of improbable means that the source material is unlikely to be in or below the soil. The ratings for sand and gravel do not consider the quality of the source material because quality depends on how the source material is to be used.

Road Fill

Road fill consists of soil material that is excavated from its original position and used in road embankments elsewhere. The evaluations for road fill are for low embankments that generally are less than 6 feet in height and are less exacting in design than high embankments such as those along superhighways. The rating is given for the whole soil, from the surface to a depth of about 5 feet, based on the assumption that soil horizons will be mixed in loading, dumping, and spreading. Soils are rated as to the amount of material available for excavation, the ease of excavation, and how well the material performs after it is in place.

Sand

Sand as a construction material is usually defined as particles ranging in size from 0.074 mm (sieve #200) to 4.75 mm (sieve #4) in diameter. Sand is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated. If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

Gravel

Gravel as a construction material is defined as particles ranging in size from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter.

Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil

The term "topsoil" has several meanings. As used here, the term describes soil material used to cover an area so as to improve soil conditions for establishment and maintenance of adapted vegetation. Generally, the upper part of the soil, which is richest in organic matter, is most desirable; however, material excavated from deeper layers is also used. In this rating, the upper 40 inches of soil material is evaluated for use as topsoil. In the

borrow area, the material below 40 inches is evaluated for its suitability for plant growth after the upper 40 inches is removed. The soil properties that are used to rate the soil as topsoil are those that affect plant growth, the ease of excavation, loading, and spreading, and those that affect the reclamation of the borrow area.

This subsection includes:

• (a) Construction Materials and Excavating

Construction Materials

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
5000:	į	į	į	į
BASEHOR	•	Improbable:	Improbable:	Poor:
	depth to rock	excess fines	excess fines 	small stones depth to rock
5001:				
BASEHOR	:	Improbable:	Improbable:	Poor:
	slope	excess fines	excess fines	large stones
	depth to rock			slope depth to rock
002:				
CGIRK	!	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	too clayey
	shrink-swell wetness			wetness
0000:		1		
BARDEN	Poor:	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	too clayey
001:	 	 	 	į Imagas
BOLIVAR	- Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
	depth to rock	excess lines	excess Times	SMAII SCORES
002: IBERAL	Dooms	 Improbable:	 Twownshahles	 Poor:
IBERAL	low strength	excess fines	Improbable: excess fines	too clayey
	shrink-swell			
5000:				
UMANSVILLE	- Poor:	Improbable:	Improbable:	Fair:
	low strength	excess fines	excess fines	thin layer
	 		l	too clayey
000:	į	İ		į
ONITEAU	!	Improbable: excess fines	Improbable: excess fines	Poor:
	low strength wetness	excess lines	excess lines	wetness
001:				
DAMERON	- Good	Improbable:	Improbable:	Poor:
		excess fines	excess fines	area reclaim
000, 70001:				i
ONA		Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	small stones
002, 70003:	į.	į	<u> </u>	į
LSUP	:	Improbable:	Improbable:	Poor:
	low strength shrink-swell	excess fines	excess fines	area reclaim
	SITTIN_SMETT			too clayey
			1	
004:	·	i	i	in
	- Poor:	Improbable:	Improbable:	Poor:
	slope	excess fines	excess fines	area reclaim
004: LSUP	:			!

Construction Materials--Continued

Map symbol and soil name	 Roadfill 	 Sand	Gravel	Topsoil
	 	[[[
0005:	İ	i	j	İ
BLUEYE	! ** *	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	small stones
	shrink-swell		!	too clayey
	depth to rock			l I
MOKO	 Poor:	 Improbable:	 Improbable:	 Poor:
	large stones	large stones	large stones	large stones
	depth to rock	excess fines	excess fines	depth to rock
				[
0006:	!	ļ .	ļ .	ļ
CRELDON	!	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	area reclaim
	shrink-swell	ļ i	ł	small stones too clayey
	! 	I I		coo crayey
0007:	İ	i		<u> </u>
CLIQUOT	Poor:	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	small stones
	shrink-swell	ļ	!	too clayey
				ļ
0008, 70009:	 Page	Towner - 1 1 - 2 -	Tanana - 1 - 2 - 2 - 2 - 2	 Page
GOSS	1	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess rines	small stones too clayey
	! 			coc crayey
0010:	İ			i
GOSS	Poor:	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	slope
	slope	ļ.	ļ	small stones
				too clayey
0011:	 	l I	l I	l I
	 Poor:	 Improbable:	 Improbable:	Poor:
	low strength	excess fines	excess fines	slope
	slope	į	i	small stones
	ĺ	ĺ	Ì	too clayey
	!	ļ	ļ	ļ .
MOKO	! ** *	Improbable:	Improbable:	Poor:
	large stones	large stones	large stones	large stones
	depth to rock slope	excess lines	excess lines	depth to rock slope
	52000			probe
0012:	İ	i	İ	i
HOBERG	Fair:	Improbable:	Improbable:	Poor:
	thin layer	excess fines	excess fines	area reclaim
	wetness	ļ	ļ	small stones
0010				
0013:	 Doome	 Tmmmahalala	 Temperature	 Doome
MOKO	!	Improbable: large stones	Improbable:	Poor:
	large stones depth to rock	excess fines	large stones excess fines	large stones depth to rock
		Checon Thies	CHOCOS TIMES	402011 00 1001
	İ	i	i	i
0014:			Improbable:	Poor:
0014: MOKO	Poor:	Improbable:		
	Poor: large stones	large stones	large stones	large stones
	•		large stones excess fines	large stones depth to rock
	large stones	large stones	•	:
	large stones depth to rock	large stones	•	depth to rock

Construction Materials--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
			ļ	ļ
0015:	i İ		i	i
PEMBROKE	Poor:	Improbable:	Improbable:	Fair:
	low strength	excess fines	excess fines	area reclaim
		I	I	small stones
				too clayey
0016, 70017,	 		<u> </u>	
70018:	İ	İ	j	j
GOODSON	Poor:	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	area reclaim
	shrink-swell			small stones
	 			too clayey
039:	! 		i	i
SACVILLE	Poor:	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	too clayey
	shrink-swell	!	ļ	wetness
	wetness			ļ
8000:	! 			İ
OMME	Good	Improbable:	Improbable:	Poor:
	[excess fines	excess fines	area reclaim
				small stones
001:	 		İ	İ
ELENSTED	Poor:	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	too clayey
	shrink-swell		I	wetness
	wetness		ļ	
002:	 		i i	ł
CIE	Poor:	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	small stones
	shrink-swell		ļ	too clayey
ATEWOOD	 Poor:	 Improbable:	 Improbable:	 Poor:
	low strength	excess fines	excess fines	small stones
	shrink-swell	j	i	too clayey
	depth to rock		ļ	ļ.
3003:	 	 	l I	ļ
CIE	Poor:	 Improbable:	 Improbable:	Poor:
	slope	excess fines	excess fines	slope
	low strength	!	ļ	small stones
	shrink-swell		ļ	too clayey
ATEWOOD	 Poor:	 Improbable:	 Improbable:	 Poor:
	slope	excess fines	excess fines	slope
	low strength	İ		small stones
	shrink-swell	j	j	too clayey
	depth to rock	!	ļ	ļ
004:	 	l I		l I
004: CIE	Poor:	Improbable:	 Improbable:	Poor:
	low strength	excess fines	excess fines	slope
	shrink-swell	j	j	small stones
	ļ.	į	į	too clayey
8005:	 	l I	l I	l I
CIE	Poor:	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	small stones

Construction Materials--Continued

	 			
Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
72006-				
73006: PERIDGE	Poor:	 Improbable:	 Improbable:	 Poor:
PERIOE	low strength	excess fines	excess fines	area reclaim
	10# bereiger	Glocob Lines	CACCOD TIACS	small stones
		i	i	
73007:		į	į	i
PLATO	Poor:	Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	area reclaim
	shrink-swell	ļ	ļ	small stones
				too clayey
22000 52000		-	ļ	ļ
73008, 73009: VIRATON	Today.	 Tourselballa.	 Townshables	l Parent
VIRATON	shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim
	wetness	excess lines	excess lines	small stones
	WCCICOD	i		l Secret
73010:		i	i	i
WILDERNESS	Moderate:	Improbable:	 Improbable:	Poor:
	low strength	excess fines	excess fines	area reclaim
j	shrink-swell	İ	İ	small stones
			I	I
74625:			I	I
HARTVILLE		Improbable:	Improbable:	Poor:
	low strength	excess fines	excess fines	too clayey
	shrink-swell	-	ļ	ļ
75375 :		l i	l I	ļ
HORSECREEK	Poor:	 Improbable:	 Improbable:	 Fair:
HORDISCRIPTION	low strength	excess fines	excess fines	small stones
	2011 20120113011			too clayey
		i	i	
75376:		į	j	İ
CEDARGAP	Good	Improbable:	Improbable:	Poor:
		excess fines	excess fines	area reclaim
			I	small stones
		ļ	į	ļ
75377:	_ •			ļ I
RACKET	Good	Probable	Probable	Poor:
		l i		area reclaim
75378:		-		ł
STURKIE	Fair:	 Improbable:	 Improbable:	 Fair:
	low strength	excess fines	excess fines	small stones
		1		too clayey
		j	j	į
9000.			į	j
PITS, QUARRIES			1	I
		ļ	Ţ	ļ.
99001.		ļ	ļ	ļ
WATER		!	į	!
99003.		ļ	ļ	!
		I	ı	1
MISCELLANEOUS WATER		i	i	i